

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:  
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# PCT

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference 008998-0015		Date of mailing 11 May 2005 (11-05-2005) <i>(day/month/year)</i>																								
<b>FOR FURTHER ACTION</b> See paragraph 2 below																										
International application No. <b>PCT/CA2005/000006</b>	International filing date <i>(day/month/year)</i> 06 January 2005 (06-01-2005)	Priority date <i>(day/month/year)</i> 07 January 2004 (07-01-2004)																								
International Patent Classification (IPC) or both national classification and IPC IPC7 H04L 29/02, IPC7 H04L 5/22, IPC7 H04L 12/40, IPC7 H04L 12/18																										
Applicant <b>ALSTOM CANADA INC. ET AL</b>																										
<p>1. This opinion contains indications relating to the following items :</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;"><input checked="" type="checkbox"/></td> <td style="width: 35%;">Box No. I</td> <td style="width: 50%;">Basis of the opinion</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Rule 43bis.1(a)(I) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement.</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> <p>2. <b>FURTHER ACTION</b>          If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.</p> <p>If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.</p> <p>For further options, see Form PCT/ISA/220.</p> <p>3. For further details, see notes to Form PCT/ISA/220.</p>			<input checked="" type="checkbox"/>	Box No. I	Basis of the opinion	<input checked="" type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Rule 43bis.1(a)(I) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement.	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input checked="" type="checkbox"/>	Box No. VIII	Certain observations on the international application
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Name and mailing address of the ISA/CA Canadian Intellectual Property Office Place du Portage I, C114 - 1st Floor, Box PCT 50 Victoria Street Gatineau, Quebec K1A 0C9  Facsimile No: 001(819)953-2476		Authorized officer   <div style="text-align: right;">Stuart Ginn (819) 934-5147</div>																								

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/CA2005/000006

**Box No. I      Basis of this opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language which it was filed, unless otherwise indicated under this item.  
  
[ ] This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of :
  - a. type of material
    - [ ] a sequence listing
    - [ ] table(s) related to the sequence listing
  - b. format of material
    - [ ] in written format
    - [ ] in computer readable form
  - c. time of filing/furnishing
    - [ ] contained in the international application as filed.
    - [ ] filed together with the international application in computer readable form.
    - [ ] furnished subsequently to this Authority for the purposes of search.
3. [ ] In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statement that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments :

<p align="center"><b>WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY</b></p>		<p>International application No. PCT/CA2005/000006</p>
<b>Box No. II</b>	<b>Priority</b>	

1. ☐ The following document has not yet been furnished :

☐ copy of the earlier application whose priority has been claimed (Rules 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rules 43*bis*.1 and 66.7(b)).

(a)

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary :

The validity of the priority has not been checked because the Authority does not have in its possession a copy of the earlier application. Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the priority date.

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/CA2005/000006

**Box No. V Reasoned statement under Rule 43bis.1(a)(I) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Claims	<u>2-9, 11-14, 18-22, 24-40</u>	YES
	Claims	<u>1, 10, 15-17, 23</u>	NO
Inventive step (IS)	Claims	<u>2-7, 11-13, 15-21, 23-25, 27-40</u>	YES
	Claims	<u>1 8-10, 14-17, 22-23, 26</u>	NO
Industrial applicability (IA)	Claims	<u>1-40</u>	YES
	Claims	<u>NONE</u>	NO

**2. Citations and explanations :**

Reference is made to the following documents:

D1: "SLK2701 OC-48/24/12/3 SONET/SDH Multirate Transceiver", December 2001, Texas Instruments.  
D2: EP 1107599 A2 (Terayon Communication Systems), 13 June 2001 (2001.06.13).  
D3: WO 03084121 A1 (Short), 9 October 2003 (2003.10.09).  
D4: EP 1215848 A1 (Suzuki) 11 December 2001 (2001.12.11).

**Novelty**

For claims 1, 10, 15-17 and 23:

D1 describes a transceiver including a multiplexer/demultiplexer for digital data; support for framing ("FRAME\_EN", p. 5); pre-emphasis (through pins "PRE1" and "PRE2", p. 5); de-emphasis; a decoder (block diagram, p. 2) with a de-framer and a synchronization circuit. The decoder performs parity checking, has a variable gain amplifier with a user interface ("programmable de-emphasis for the serial output", p. 1). The de-framer includes synchronization analysis ("Frame Sync", block diagram, p. 2) and serial-to-parallel conversion (block diagram, p. 2). Finally, the transceiver comprises a data repeater and is designed for high-speed applications ("Gigabit Ethernet", p. 1).

**Inventive Step**

For claim 5:

D3 discloses a compression method for compressing digital data in which "data is compressed by using the look-up table" (p. 12, lines 21-22). To combine the look-up table compression/decompression functions of D3 with the transceiver of D1 would not involve an Inventive Step.

For claim 6:

D4 discloses a communication device for audio signals where an encoder circuit compresses a signal using a "logarithmic quantization scheme" and where a decoder decompresses a signal "in accordance with the reverse characteristic of the encoder circuit" (paragraph [0020]). To combine the compression/decompression technique of D4 with the transceiver of D1 would not involve an Inventive Step.

For claim 7:

D2 discloses a method for digital data transmission that can transmit and receive time division multiplexed digital data (abstract). To combine this ability with either the transceiver of D1 would not involve an Inventive Step.

For claims 8, 9, 14, 22, and 26:

Further additional features of the application including: having a header with less transitions than transitions in the digital data; specifying a header size of 17 bits; including a user interface for selection of a channel; audio stereo signals and an audio listening station; a serial multi-drop communication network; a multi-channel signal broadcast; broadcasting to audio-listening stations; and, repeating frames for transmission over another segment of the serial multi-drop communications network do not involve an Inventive Step over D1 in view of the common knowledge.

**Industrial Applicability**

Claims 1-40 meet the requirements for Industrial Applicability under PCT Article 33(4).

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/CA2005/000006

**Box No. VIII Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made :

Claim 31 is indefinite. It is unclear when the step of "series to parallel converting the selected one of the high-speed applications" is to occur.

Under PCT Rule 8.1(d), each main technical feature mentioned in the abstract and illustrated by a drawing in the international application shall be followed by a reference sign, placed between parentheses.